

A₃
sub B₂
add B₃

8. (Amended) A process for producing mannose-containing feed, [characterized in that] comprising treating copra meal [is treated] with a hemicellulase solution of a 3-fold or less amount by weight relative to copra meal, to release mannose contained in the copra meal.

REMARKS

Favorable reconsideration is respectfully requested in view of the foregoing amendments and the following remarks.

The specification has been carefully reviewed and editorial changes have been effected. All the changes are minor in nature and therefore do not require extensive discussion. In particular, the specification headings have been amended in conformance with U.S. practice.

Claims 1-3, 5 and 7 have been canceled without prejudice, and claims 4, 6 and 8 have been amended. The claim amendments have been presented to put the claims in better form under U.S. practice. Support for the claim amendments is readily apparent from the teachings of the specification and the original claims.

With regard to the rejection of claims 1-8 under 35 U.S.C. §103(a) as being unpatentable over Fodge et al., this rejection is deemed to be untenable and is thus respectfully traversed.

To establish a prima facie case of obviousness, the cited reference must teach or suggest the invention as a whole, including all the limitations of the claims.

What is disclosed in Fodge et al. is not a feed containing such copra meal treated with hemicellulase as the Examiner has stated, but a feed merely containing hemicellulase. The feed composition of this reference, as shown in Claim 1, consists of the mere mixture of the three components of (A) protein, vitamins and minerals, (B) a source of carbohydrates, comprising a mannan-containing hemicellulase selected from the group consisting of soybeans, corn, and alfalfa and (C) a mannanase that catalyzes the degradation of said mannan-containing hemicellulase. It does not contain mannose produced by the enzyme reaction as set forth in the present invention.

According to Fodge et al., the efficiency of the feed is improved due to the operation of the degradation products of mannan produced by the enzyme reaction in the body after the feed is given to livestock. For this purpose, the feed is pelletized after mixing said components (see Claim 9 and

Col. 3, L. 4-6), that is, the feed is used as a dry product. Therefore, it is clear that enzyme reaction does not proceed in this state of the feed.

Thus, this reference differs from the mannose-containing copra meal and the feed containing said copra meal of the present invention, since the copra meal is treated with hemicellulase solution in advance and the mannose is produced by degradation of mannan in the copra meal. Further, it is important to note that the content of mannose is in a specific range and the condition of enzyme treatment is characteristic. As a result, it is clear that the present invention is unobvious over the teachings and suggestion of Fodge et al.

With regard to the rejection of claims 1-8 under 35 U.S.C. §102(a) as being anticipated by JP 11018791, this rejection is deemed to be untenable and is thus respectfully traversed. Applicants submit that this reference is not a valid prior art reference since its publication date, January 26, 1999, is after the filing date, August 4, 1998, of the present application. Thus, Applicants respectfully request that this rejection be withdrawn.

With regard to the rejections of claims 1, 3, 5 and 7 under 35 U.S.C. §102(b) as being anticipated by JP 59045833 or JP 08173055, these rejections have been rendered moot by the cancellation of the respective claims.

With regard to the rejection of claims 1, 3, 5 and 7 under 35 U.S.C. §102(b) as being anticipated by GB 2215980, this rejection has also been rendered moot by the cancellation of the respective claims.

With regard to the rejections of claims 2, 4, 6 and 8 under 35 U.S.C. §103(a) as being unpatentable over JP 59045833 or JP 08173055, these rejections are deemed to be untenable and are thus respectfully traversed.

First, the reference JP 59045833 discloses the use of copra lees, characterized in that a liquid culture of a microbial strain of *Aspergillus* or *Bacillus* is added to an aqueous suspension of copra lees, and sugar and protein is recovered from the top clear. The reference does not describe anything about copra-derived mannose-containing feed as the Examiner has indicated.

Thus, this reference differs from the present invention in that the top clear is separated from the aqueous suspension, while the mannose-containing copra meal of the present invention is produced by enzyme reaction without separating the top clear.

With regard to the reference JP 08173055, this reference describes a feed for livestock in which a mannose-based polysaccharides which is obtained by enzyme-treating a copra lees is compounded. Said mannose-based polysaccharides contain polysaccharides having a mannose-repeating unit of 40 - 100 as the main component including oligosaccharides (Col. 2, L. 37-41), but in this reference there is not any description that the feed contains mannose.

Thus, Applicants respectfully submit that these rejections of the claims under 35 U.S.C. §103 in view of JP 59045833 or JP 08173055 cannot be sustained and should be withdrawn.

With regard to the rejection of claims 2, 4, 6 and 8 under 35 U.S.C. §103(a) as being unpatentable over GB 2215980, this rejection is deemed to be untenable and is thus respectfully traversed.

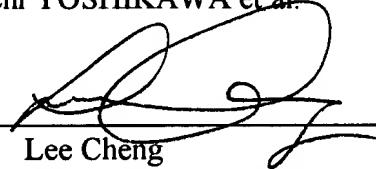
This reference discloses a method of enzymatically treating raw materials such as copra and desiccated coconut in order to obtain coconut products such as coconut oil. The reference only describes that copra and desiccated coconut highly containing coconut oil is used as raw materials for producing coconut oil and that the sludge and aqueous phase after the coconut oil has been extracted are used as base materials for feed or food (P. 6, L. 16-18). Thus, it is clear that this reference does not teach nor suggest the process for producing mannose-containing copra meal, the mannose-containing feed and the process for producing mannose-containing feed according to the present invention. Accordingly, the present invention is unobvious over the teachings and suggestions of GB2215980.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is now in condition for allowance. Such action thus respectfully solicited.

If, however, the Examiner has any suggestions for expediting allowance of the application or believe that direct contact with the Applicants' attorney will advance the prosecution of this case, the Examiner is invited to contact the undersigned at the telephone number below.

Respectfully submitted,

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